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Figure 1

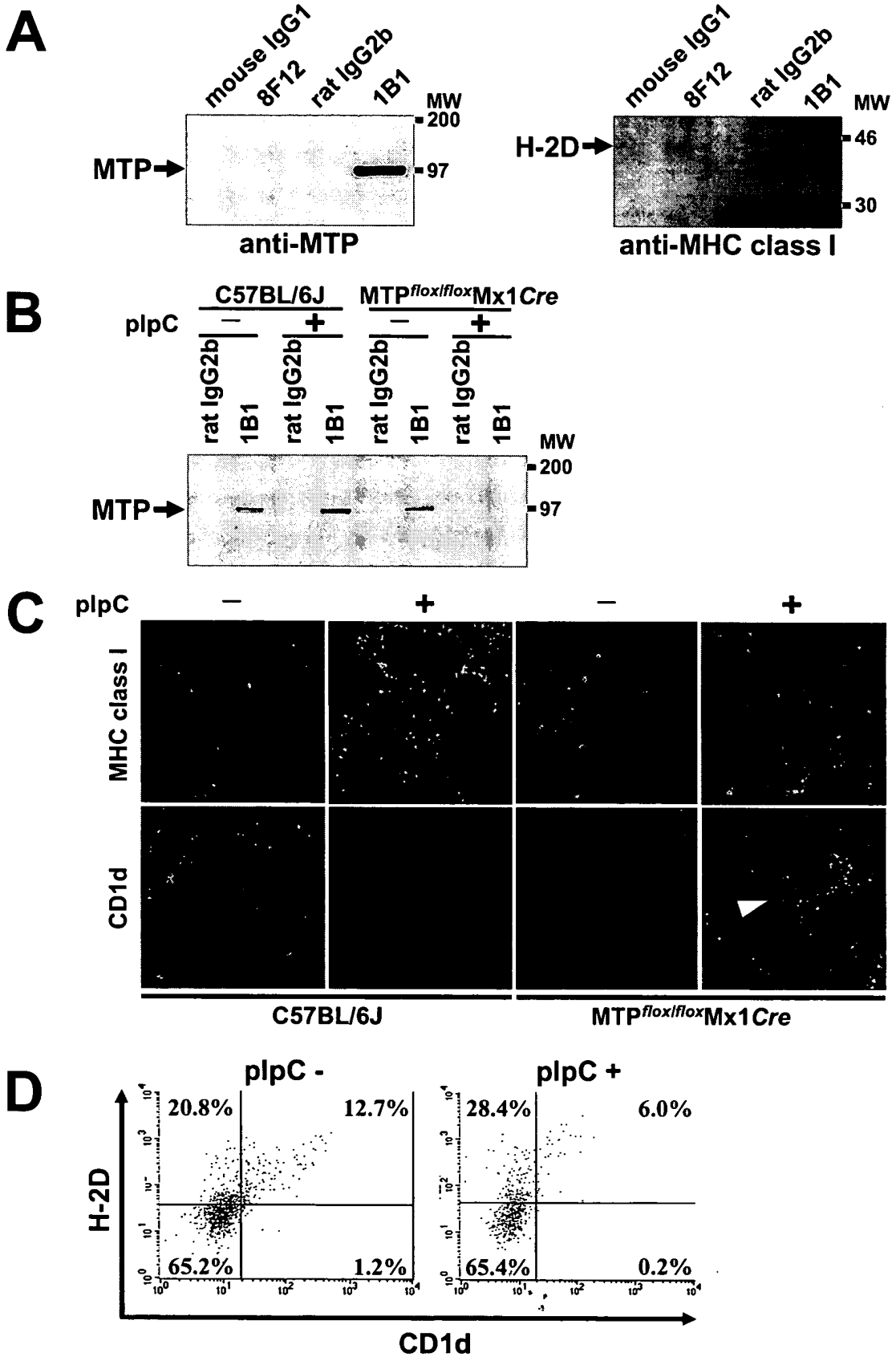

A
mouse IgG1
8F12
rat IgG2b
1B1
MW
200
97
MTP
anti-MTP
mouse IgG1
8F12
rat IgG2b
1B1
MW
46
30
H-2D
anti-MHC class I
B
C57BL/6J
MTPfloxiflox Mx1Cre
pIpC
–
+
rat IgG2b
1B1
MW
200
97
MTP
C
pIpC
–
+
MHC class I
CD1d
C57BL/6J
MTPfloxiflox Mx1Cre
D
pIpC -
pIpC +
20.8%
12.7%
65.2%
1.2%
28.4%
6.0%
65.4%
0.2%
H-2D
CD1d

Figure 2

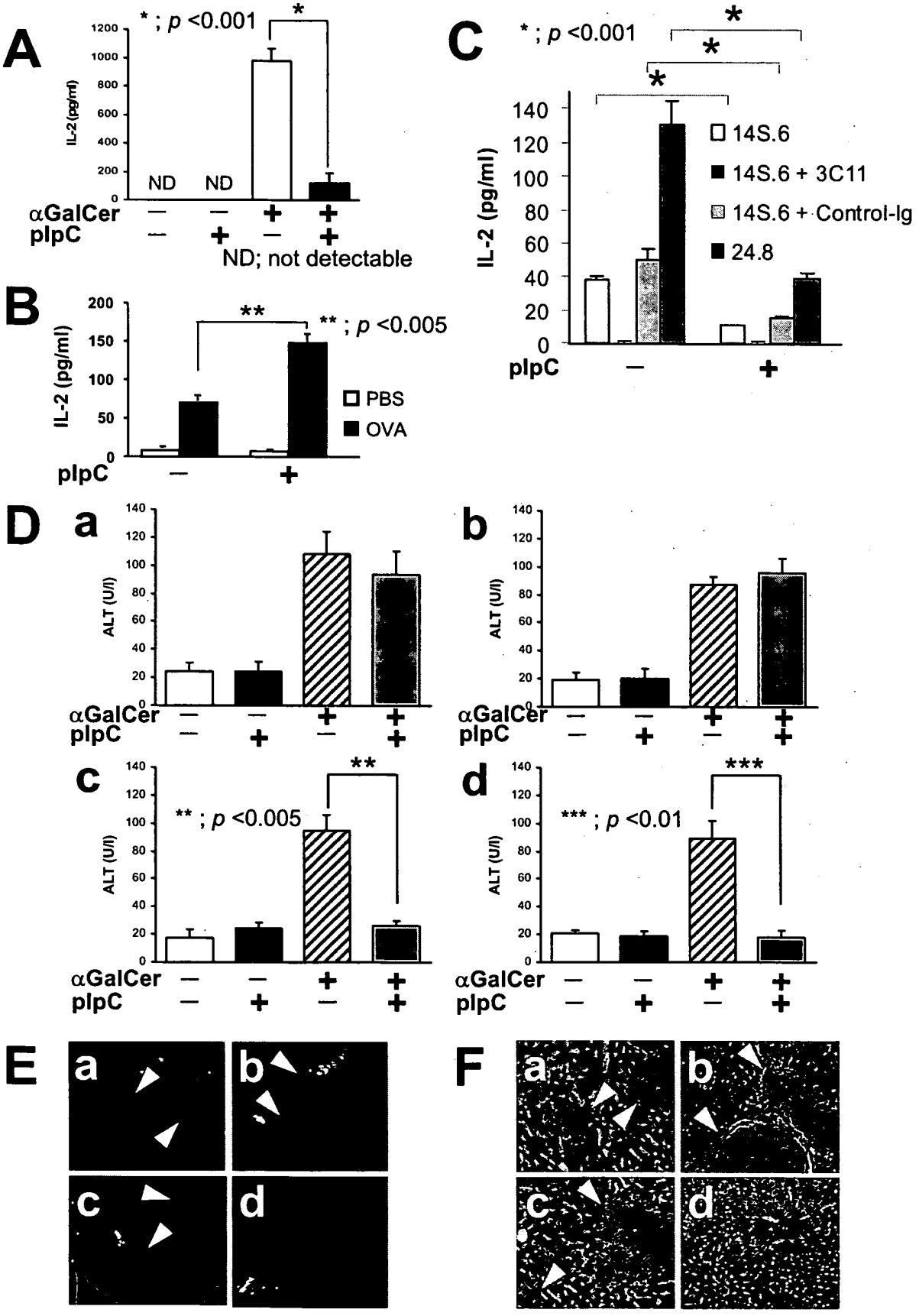
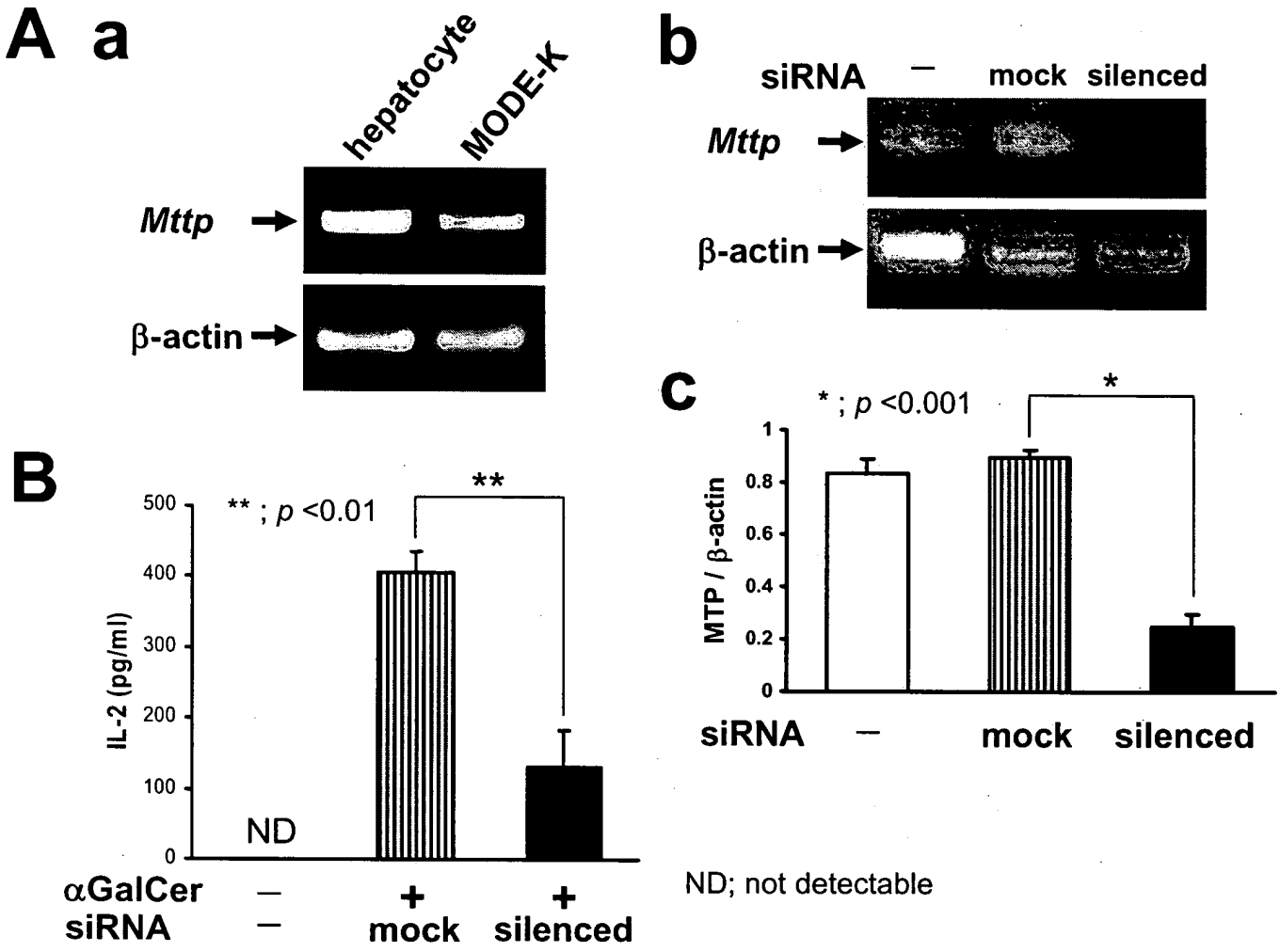

A
* ; p <0.001
IL-2 (pg/ml)
ND
ND
αGalCer
pIpC
ND; not detectable
B
** ; p <0.005
IL-2 (pg/ml)
PBS
OVA
pIpC
C
* ; p <0.001
IL-2 (pg/ml)
14S.6
14S.6 + 3C11
14S.6 + Control-Ig
24.8
pIpC
D
a
b
c
d
ALT (U/l)
** ; p <0.005
*** ; p <0.01
αGalCer
pIpC
E
F

Figure 3



ND; not detectable

Figure 4

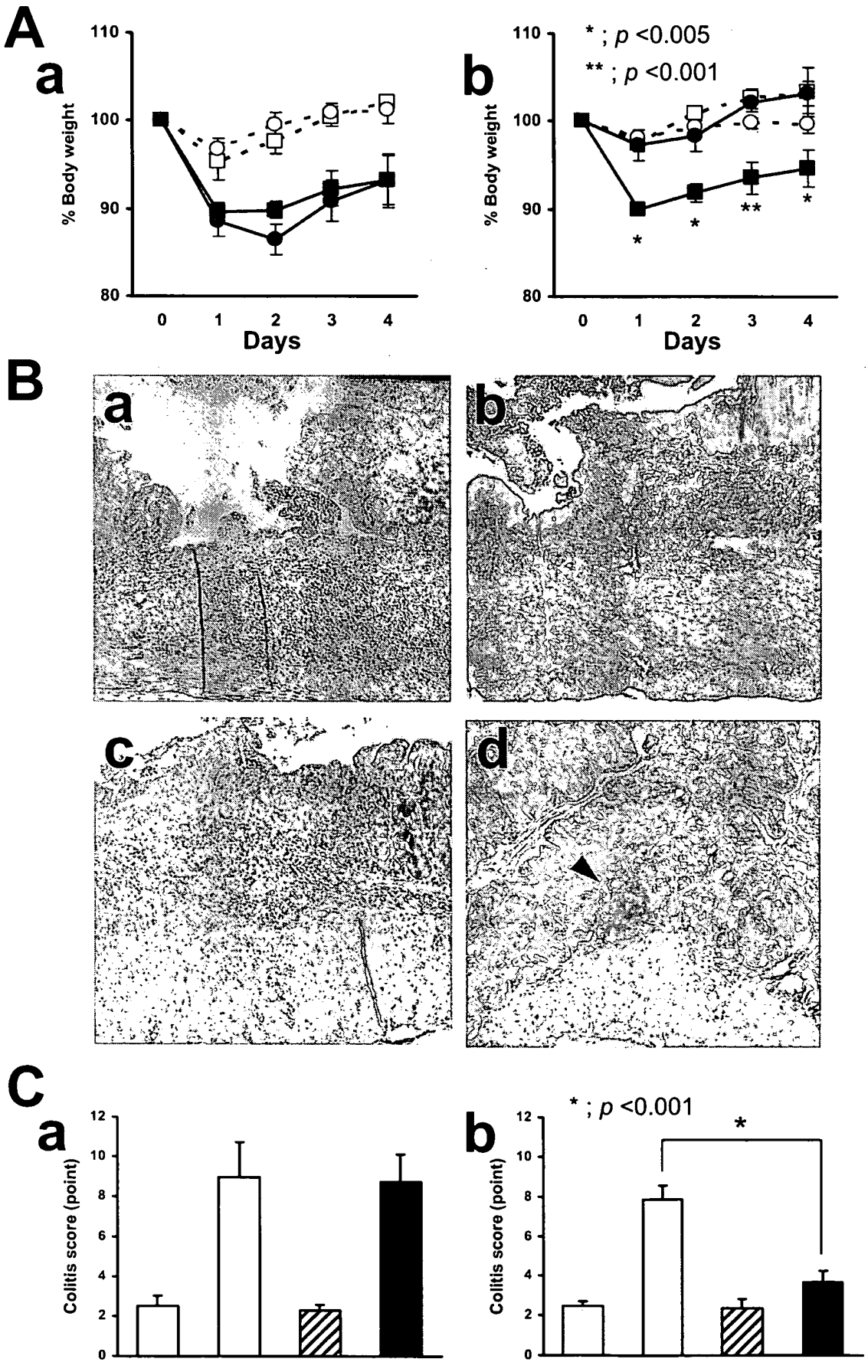
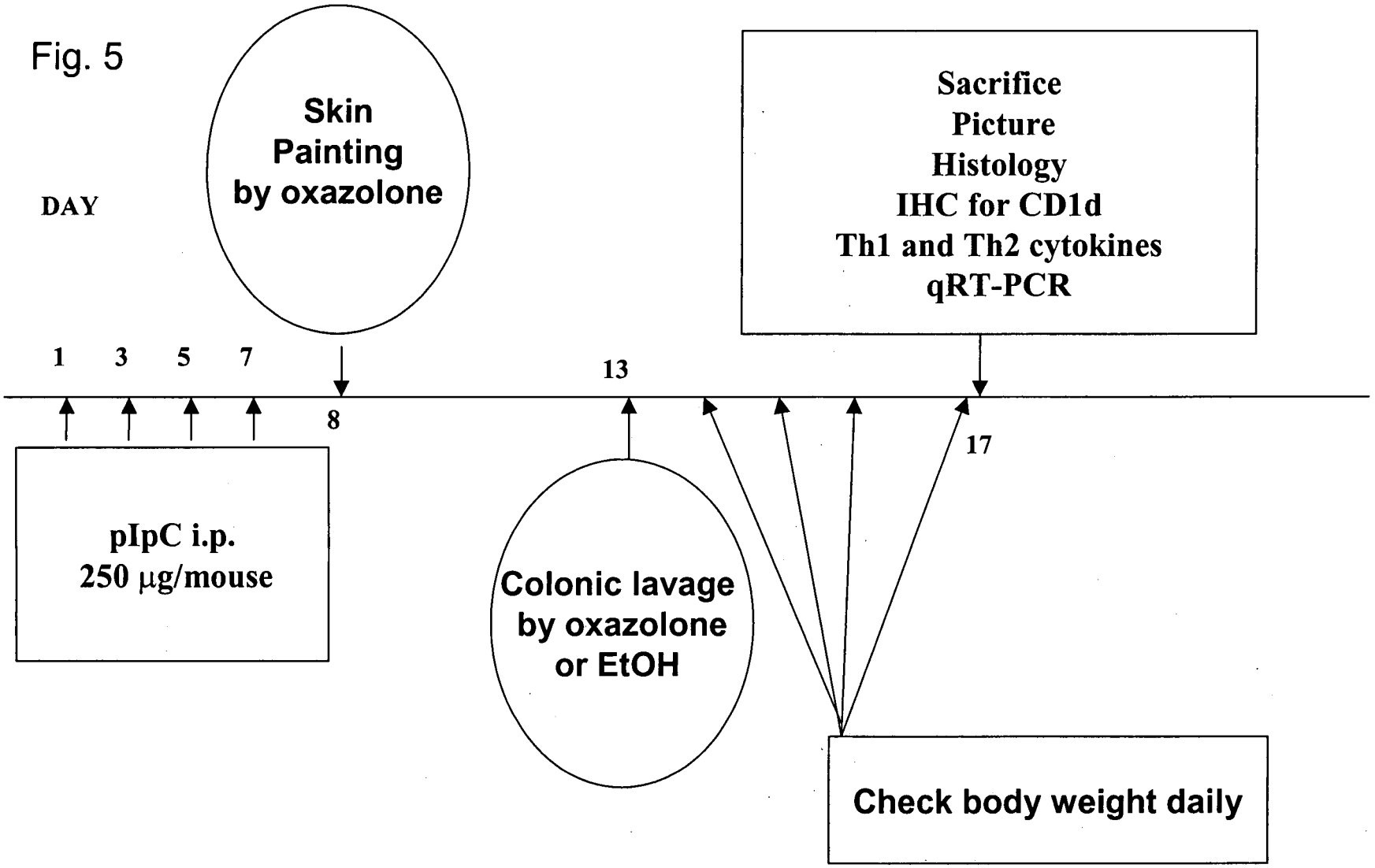

A
a
b
% Body weight
110
100
90
80
0
1
2
3
4
Days
* ; p <0.005
** ; p <0.001
B
a
b
c
d
C
a
b
Colitis score (point)
12
10
8
6
4
2
0
* ; p <0.001
*

Fig. 5


DAY
Skin
Painting
by oxazolone
Sacrifice
Picture
Histology
IHC for CD1d
Th1 and Th2 cytokines
qRT-PCR
1
3
5
7
8
13
17
pIpC i.p.
250 μg/mouse
Colonic lavage
by oxazolone
or EtOH
Check body weight daily

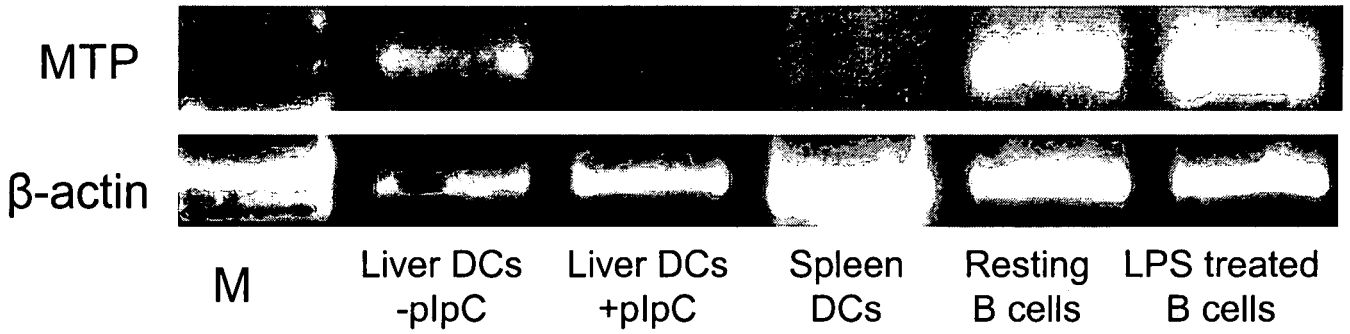
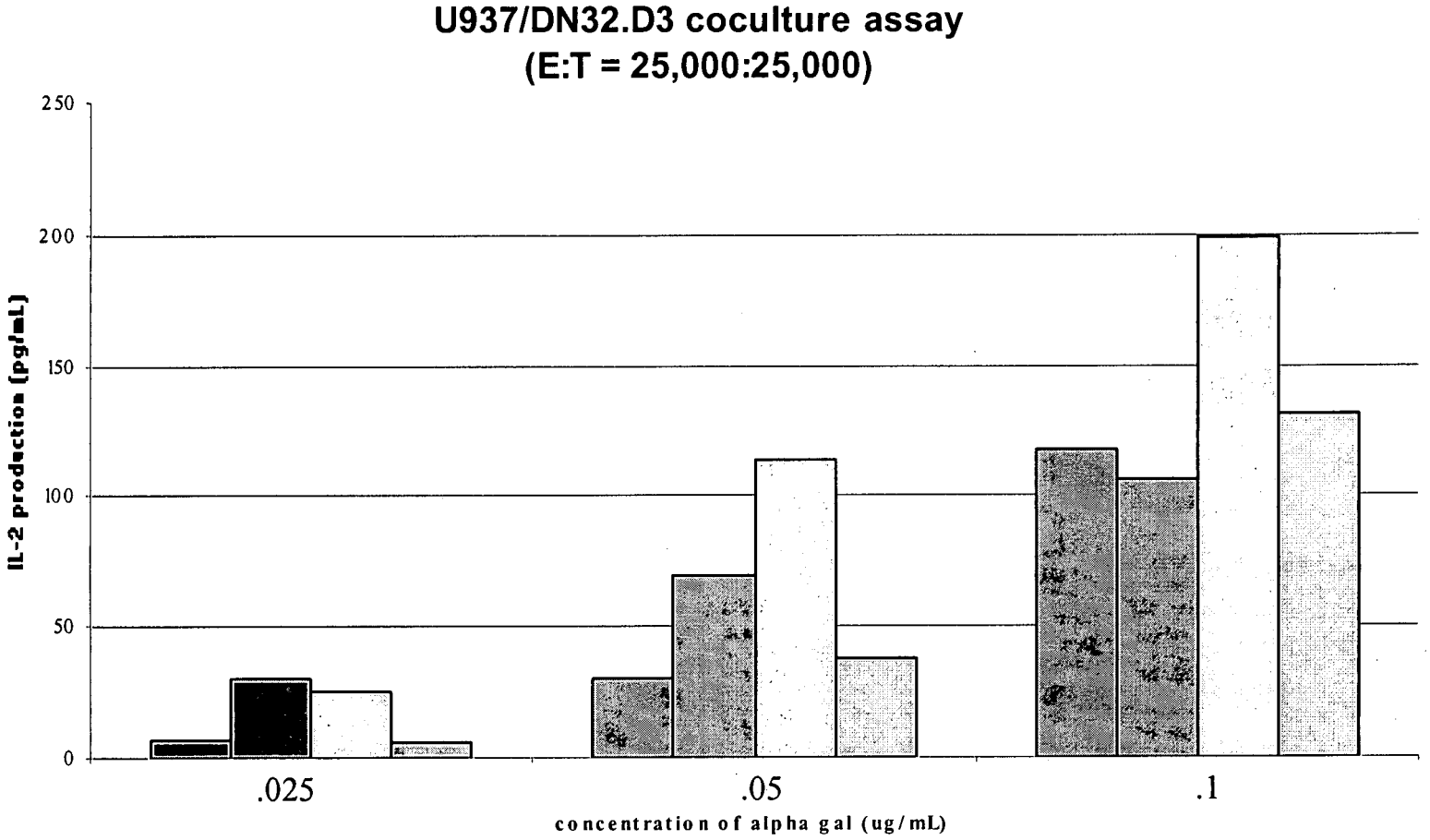

MTP
β-actin
M
Liver DCs -pIpC
Liver DCs +pIpC
Spleen DCs
Resting B cells
LPS treated B cells

Figure 6

Fig. 7

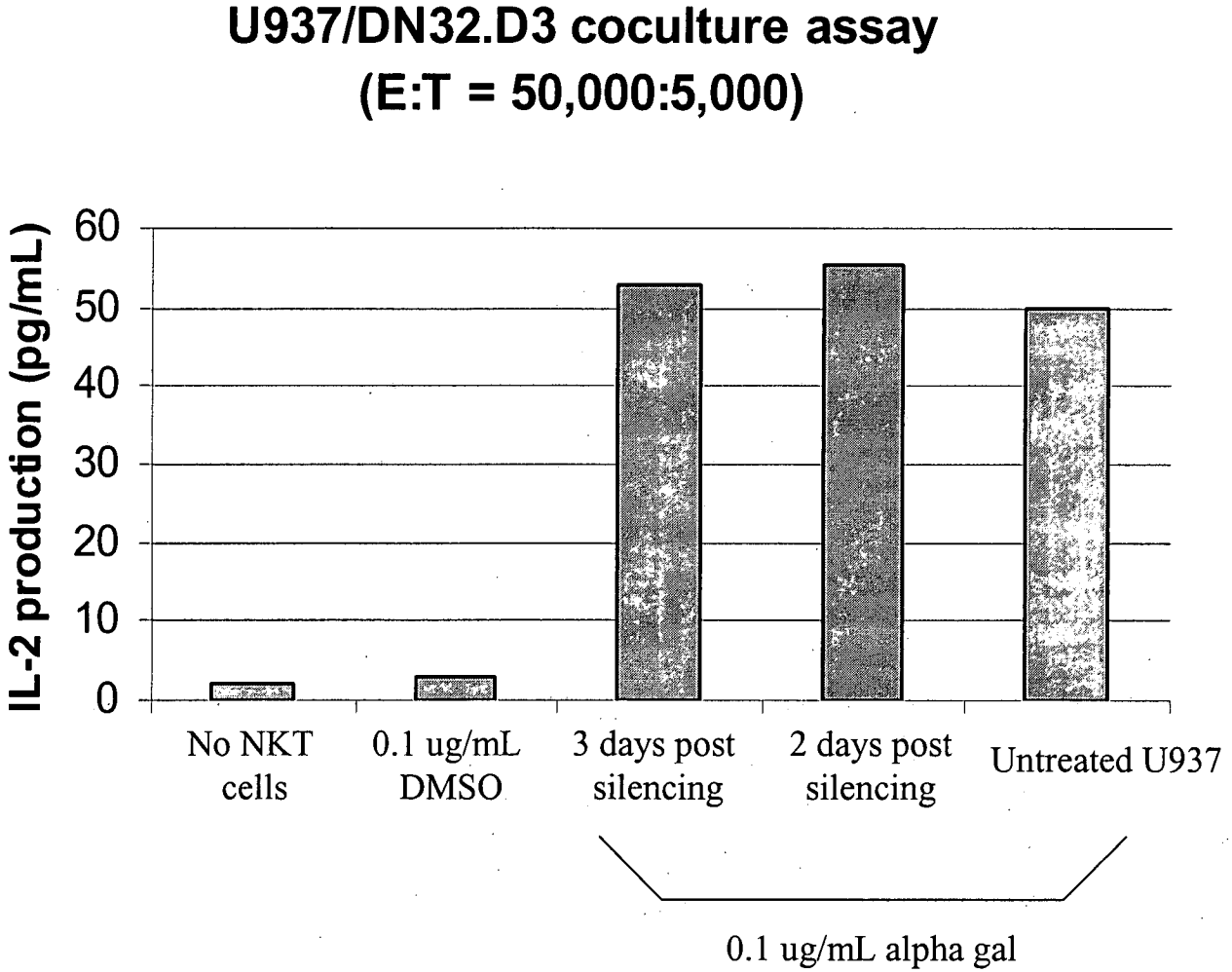
Silenced and wild type U937 cells are equally capable of presenting alpha gal to NKT cells at a 1:1 effecter to target ratio.



Each data point represents 4 independent trials.
IL-2 production in the absence of alpha gal was negligible.

Fig.8

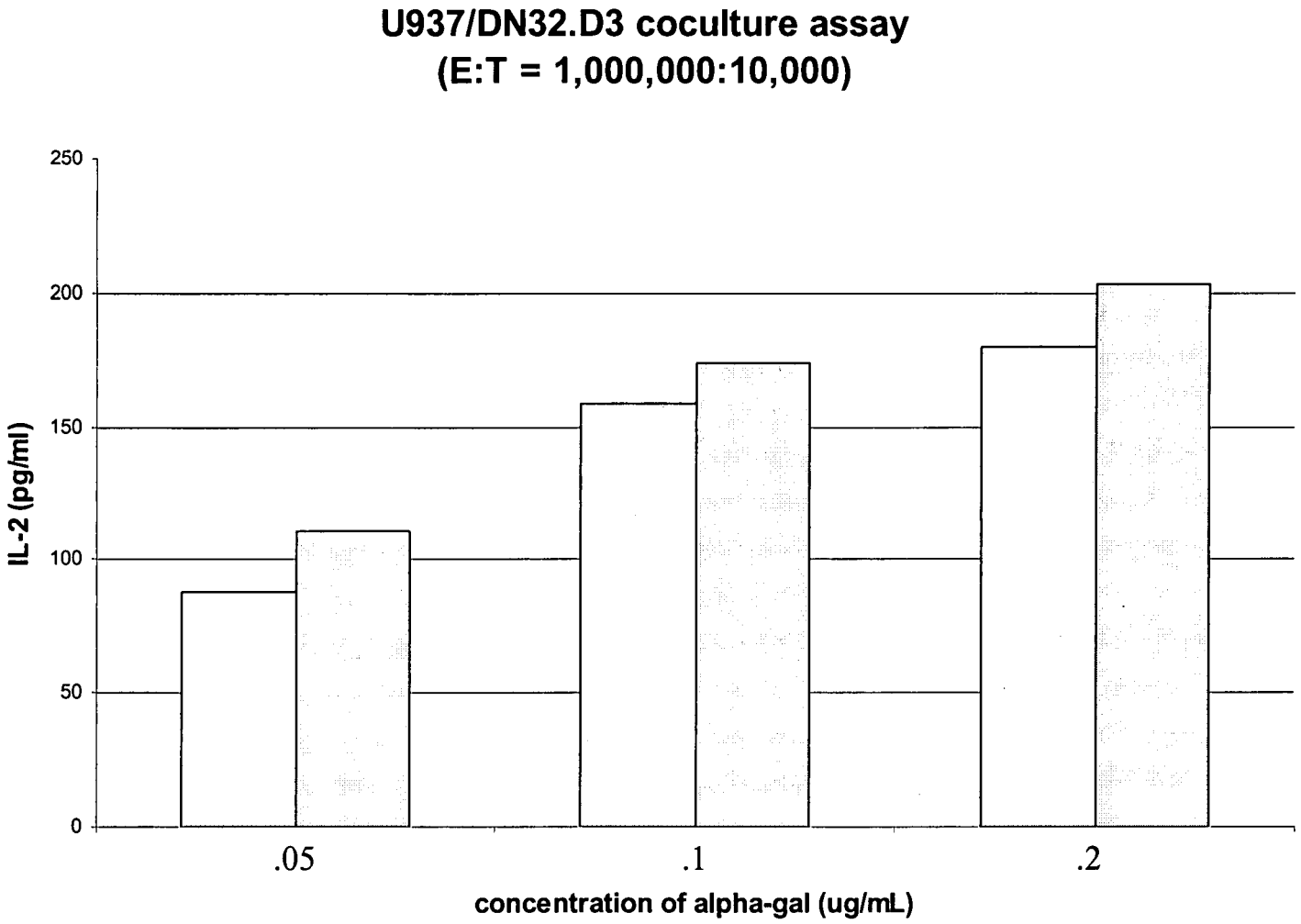
Silenced and wild type U937 cells are equally capable of presenting alpha gal to NKT cells at a 10:1 effecter to target ratio.



Each data point represents 4 independent trials.

Fig. 9

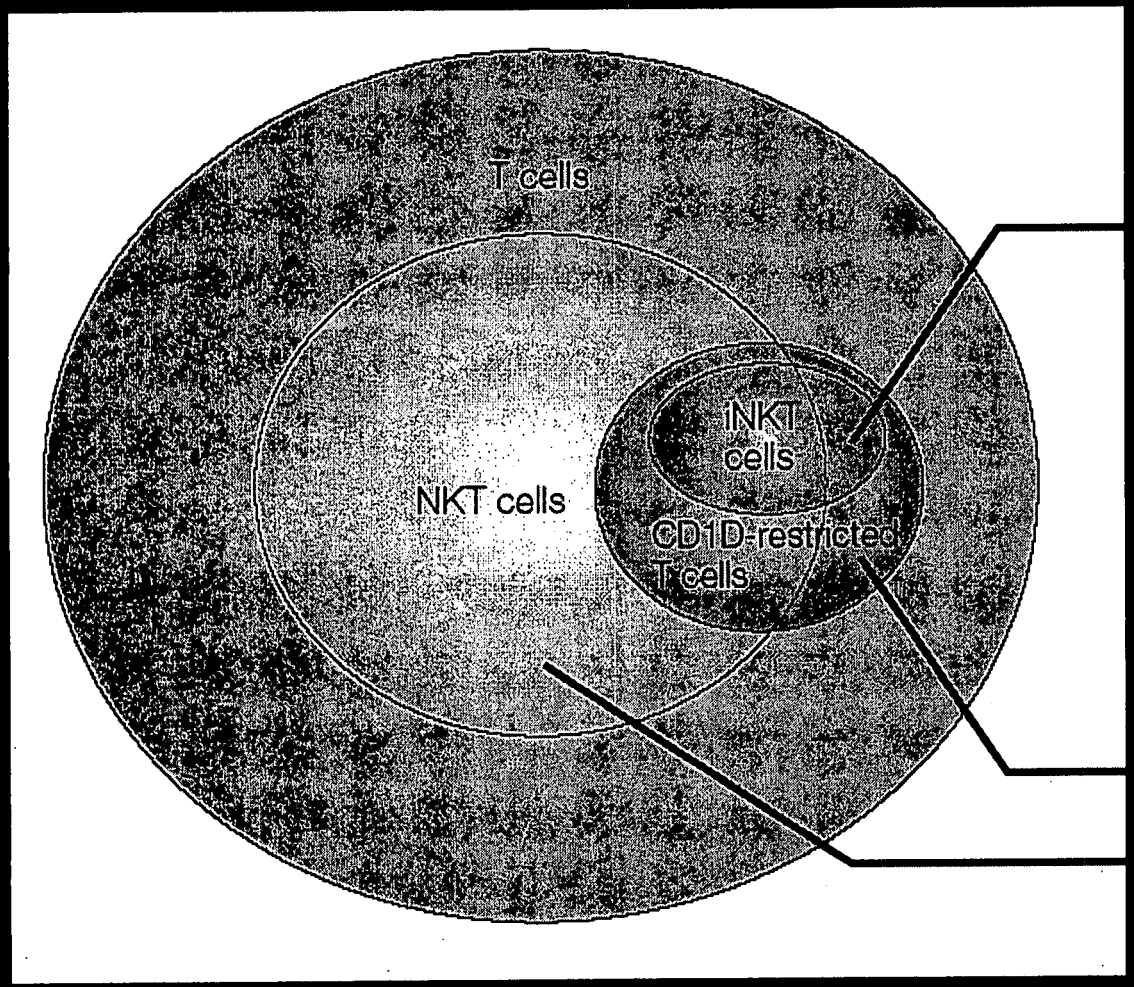
Silenced and wild type U937 cells are not equally capable of presenting alpha gal to NKT cells at a 100:1 effecter to target ratio.



Each data point represents one trial.

IL-2 production in the absence of alpha gal was an average of 48.7 pg/mL.

The World of Natural Killer T (NKT) Cells: CD1d-restricted and unrestricted



Adapted from Nature Reviews Immunol 2003;3:211

Figure 10

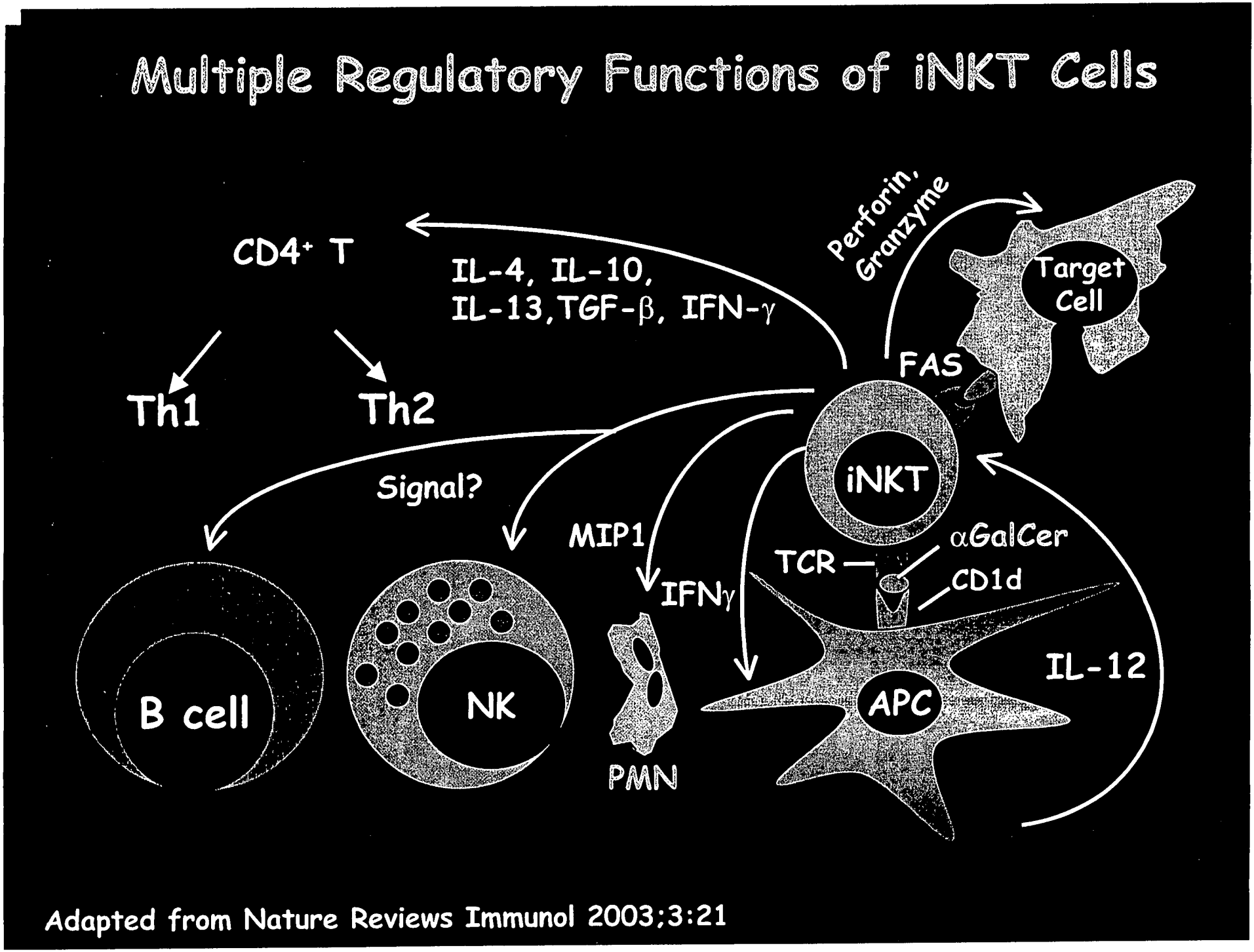

Multiple Regulatory Functions of iNKT Cells
CD4+ T
IL-4, IL-10,
IL-13, TGF-β, IFN-γ
Perforin,
Granzyme
Target
Cell
FAS
Th1
Th2
iNKT
Signal?
MIP1
αGalCer
TCR
CD1d
IFNγ
IL-12
B cell
NK
APC
PMN
Adapted from Nature Reviews Immunol 2003;3:21

Figure 11

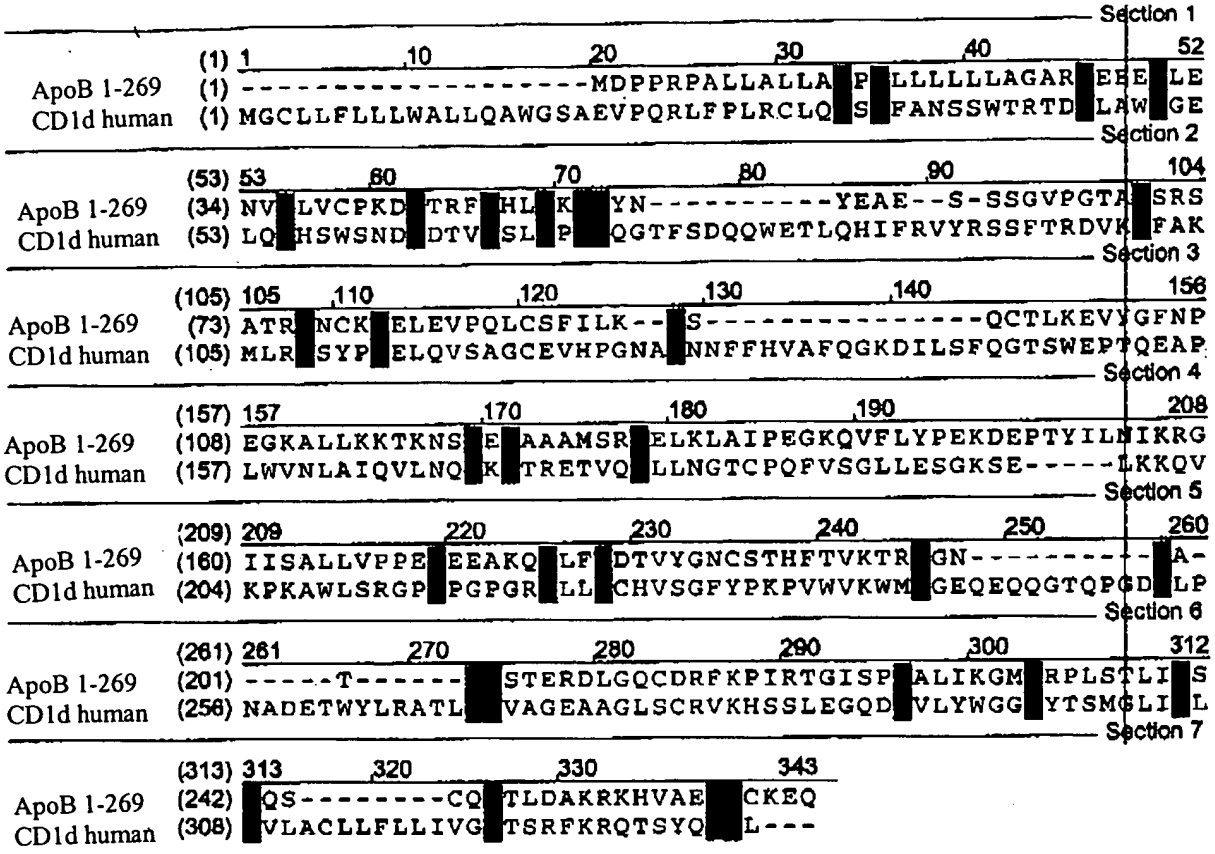

Section 1
(1) 1 10 20 30 40 52
ApoB 1-269 (1) ----------MDPPRPALLALLA P LLLLLLAGAR EEE LE
CD1d human (1) MGCLLFLLLWALLQAWGSAEVPQRLFPLRCLQ S FANSSWTRTD LAW GE
Section 2
(53) 53 60 70 80 90 104
ApoB 1-269 (34) NV LVCPKD TRF HL K YN----------YEAE--S-SSGVPGTA SRS
CD1d human (53) LQ HSWSND DTV SL P QGTFSDQQWETLQHIFRVYRSSFTRDVK FAK
Section 3
(105) 105 110 120 130 140 156
ApoB 1-269 (73) ATR NCK ELEVPQLCSFILK-- S----------QCTLKEVYGFNP
CD1d human (105) MLR SYP ELQVSAGCEVHPGNA NNFFHVAFQGKDILSFQGTSWEPTQEAP
Section 4
(157) 157 170 180 190 208
ApoB 1-269 (108) EGKALLKKTKNS E AAAMSR ELKLAIPEGKQVFLYPEKDEPTYILNIKRG
CD1d human (157) LWVNLAIQVLNQ K TRETVQ LLNGTCPQFVSGLLESGKSE-----LKKQV
Section 5
(209) 209 220 230 240 250 260
ApoB 1-269 (160) IISALLVPPE EEAKQ LF DTVYGNCSTHFTVKTR GN---------- A-
CD1d human (204) KPKAWLSRGP PGPGR LL CHVSGFYPKPVWVKWM GEQEQQGTQPGD LP
Section 6
(261) 261 270 280 290 300 312
ApoB 1-269 (201) -----T------ STERDLGQCDRFKPIRTGISP ALIKGM RPLSTLI S
CD1d human (256) NADETWYLRATL VAGEAAGLSCRVKHSSLEGQD VLYWGG YTSMGLI L
Section 7
(313) 313 320 330 343
ApoB 1-269 (242) QS--------CQ TLDAKRKHVAE CKEQ
CD1d human (308) VLACLLFLLIVG TSRFKRQTSYQ L---

Figure 12

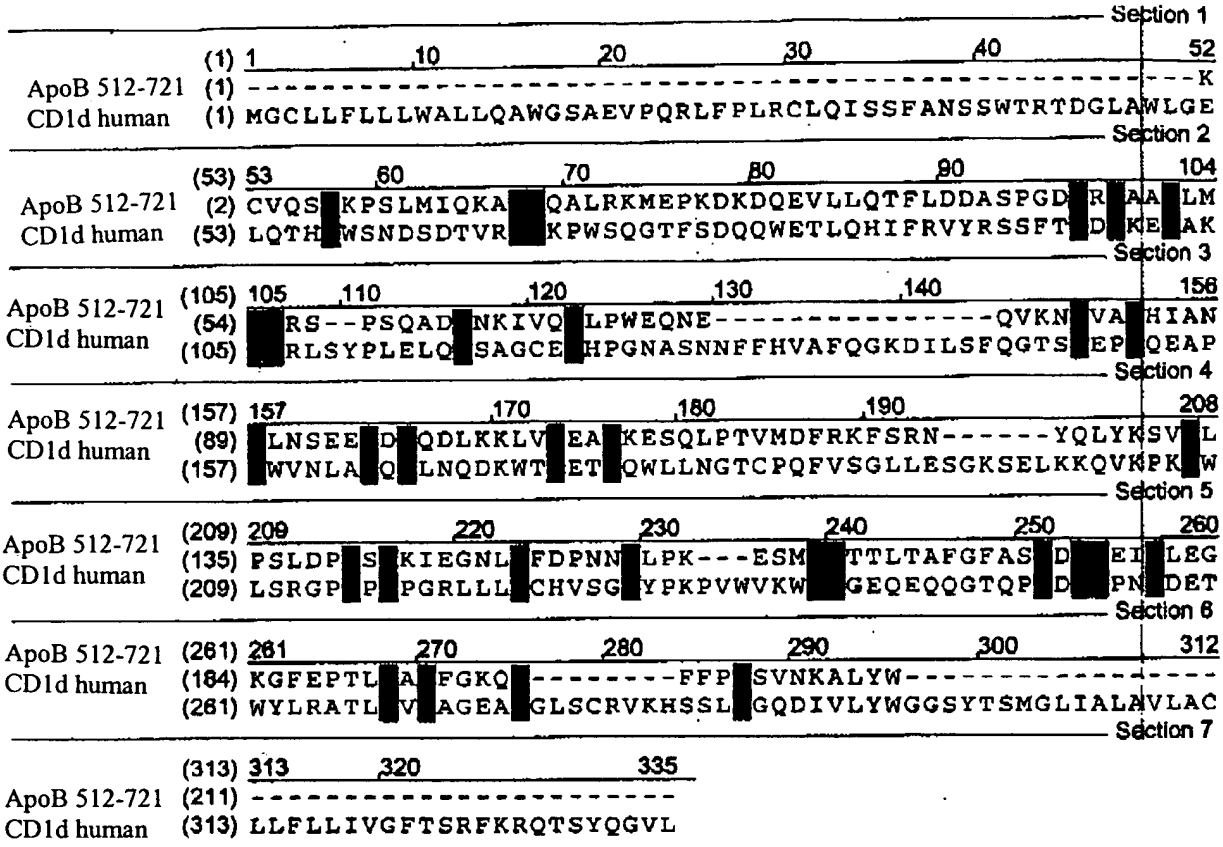

Section 1
(1) 1 10 20 30 40 52
ApoB 512-721 (1) ----------K
CD1d human (1) MGCLLFLLLWALLQAWGSAEVPQRLFPLRCLQISSFANSSWTRTDGLAWLGE
Section 2
(53) 53 60 70 80 90 104
ApoB 512-721 (2) CVQS KPSLMIQKA QALRKMEPKDKDQEVLLQTFLDDASPGD R AA LM
CD1d human (53) LQTH WSNDSDTVR KPWSQGTFSDQQWETLQHIFRVYRSSFT D KE AK
Section 3
(105) 105 110 120 130 140 156
ApoB 512-721 (54) RS--PSQAD NKIVQ LPWEQNE----------QVKN VA HIAN
CD1d human (105) RLSYPLELQ SAGCE HPGNASNNFFHVAFQGKDILSFQGTS EP QEAP
Section 4
(157) 157 170 180 190 208
ApoB 512-721 (89) LNSEE D QDLKKLV EA KESQLPTVMDFRKFSRN------YQLYKSV L
CD1d human (157) WVNLA Q LNQDKWT ET QWLLNGTCPQFVSGLLESGKSELKKQVKPK W
Section 5
(209) 209 220 230 240 250 260
ApoB 512-721 (135) PSLDP S KIEGNL FDPNN LPK---ESM TTLTAFGFAS D EI LEG
CD1d human (209) LSRGP P PGRLLL CHVSG YPKPVWVKW GEQEQQGTQP D PN DET
Section 6
(261) 261 270 280 290 300 312
ApoB 512-721 (164) KGFEPTL A FGKQ--------FFP SVNKALYW----------
CD1d human (261) WYLRATL V AGEA GLSCRVKHSSL GQDIVLYWGGSYTSMGLIALAVLAC
Section 7
(313) 313 320 335
ApoB 512-721 (211) ----------
CD1d human (313) LLFLLIVGFTSRFKRQTSYQGVL

Figure 13

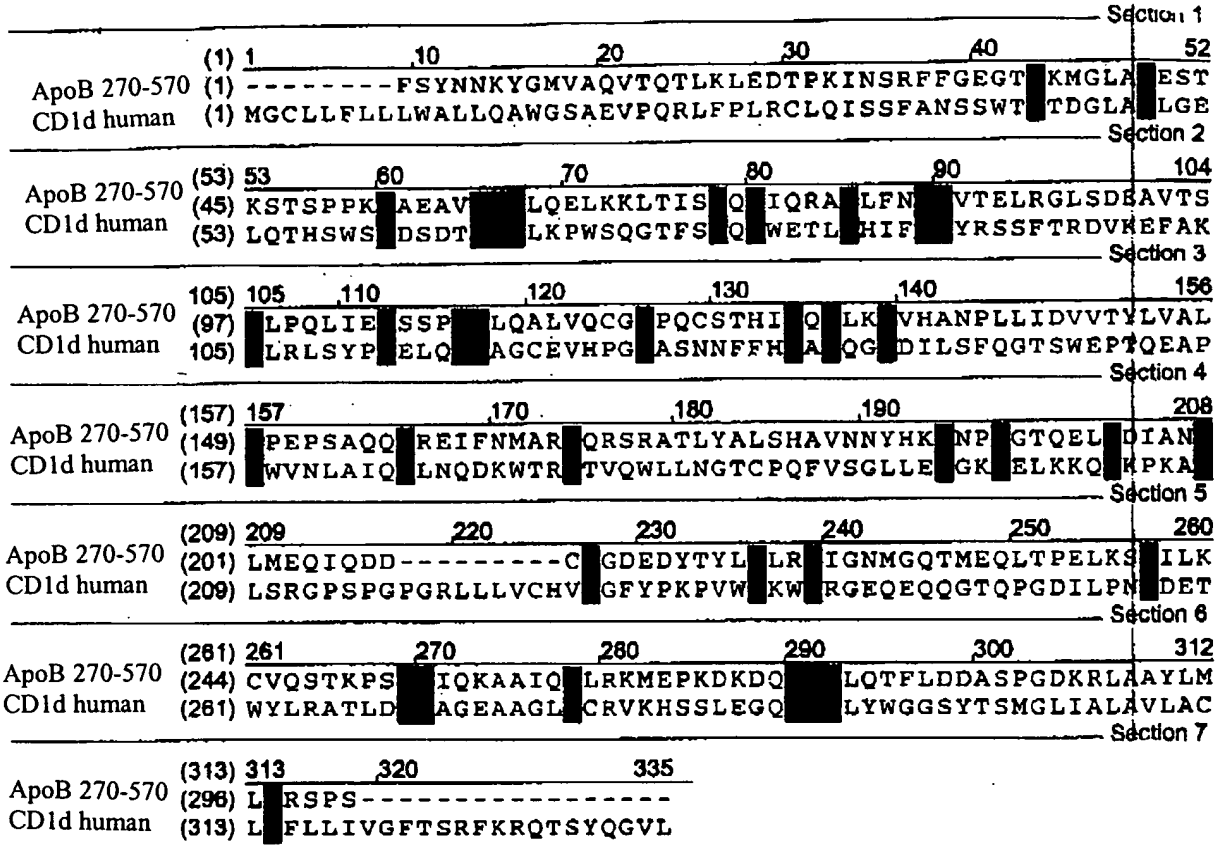

Section 1
ApoB 270-570
CD1d human
Section 2
Section 3
Section 4
Section 5
Section 6
Section 7

Figure 14